

What is claimed is:

1. A speaker system comprising:

a speaker,

amplitude detecting means for detecting an amplitude  
value of a diaphragm of the speaker to produce an amplitude  
signal corresponding to the amplitude value, and

adding means for adding the amplitude signal to a driving  
signal for driving the speaker.

2. A speaker system according to claim 1, wherein the  
amplitude detecting means comprises:

velocity detecting means for detecting a velocity of the  
diaphragm of the speaker to produce a velocity signal; and

integrating means for integrating the integrated  
velocity signal to produce the amplitude signal.

3. A speaker system according to claim 2, wherein the  
integrating means is a first order low pass filter having a  
cutoff frequency that is lower than a lowest resonance frequency  
 $f_0$  of the speaker.